Fire Debris Report Writing Guidelines

Table of Contents

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1 INTRODUCTION

FBI *Laboratory Reports* issued by Fire Debris examiners summarize analytical findings. Due to the wide variety of requests and evidence received, this document is only a general guideline for report writing. It will not always be possible to write a report using only the examples provided here. It is acceptable to use other wording as long as the results of the examinations are accurately communicated, a summary of the methodology used to reach the results is included, any known limitations are addressed, and the wording is approved during the technical review process by an authorized technical reviewer. Additionally, any wording must comply with the *FBI Approved Standards for Scientific Testimony and Report Language for Fire Debris Analysis* (FD-906).

2 SCOPE

This procedure applies to caseworking personnel who are qualified to author *Laboratory Reports* concerning Fire Debris examinations.

3 PROCEDURE

Prepare and format the *Laboratory Report* in accordance with requirements set forth in LAB-200. Prepare a **Results of Examinations** section and **Remarks** section.

3.1 Results of Examinations

The Results of Examinations section will be used to communicate the results of the Fire Debris examinations and a summary of the methodology used and will include the requirements set forth in LAB-200. This section may also include a description of the items received or other information to assist in communicating the results. Information about trade names or uses of specific compounds will also be stated, as necessary. Examples of appropriate wording for the **Results of Examinations** section are included in Appendix A.

Limitations of the results, or limitations of the examinations based on the evidence received, will be conveyed. This may include interpretative wording to aid the reader in understanding any significance of the **Results of Examinations** section. Examples of appropriate wording for such limitations can be found in Appendix B.

Limitations may include the following:

- If examinations were limited based on limited specimen amounts, this will be stated.
- If examinations were limited due to the nature of the packaging of the material, this will be stated. This may result in no examinations being performed.
- If examinations were limited by the method used to collect the samples, this will be stated.

3.2 Remarks

The **Remarks** section will include the requirements set forth in Lab-200

4 LIMITATIONS

Every scenario cannot be anticipated. This document only serves as a general guideline.

5 REFERENCES

FBI Approved Standards for Scientific Testimony and Report Language for Fire Debris Analysis, FD-906

6 REVISION HISTORY

Revision	Issued	Changes
00	7/15/2020	Original document issued
01	7/15/2022	Issuance to comply with Lab reformatting policy. Removed *Explosive Chemistry* from Section 1 ASSTR document title as that will now be a separate document in CU.

APPENDIX A: EXAMPLE WORDING FOR THE RESULTS OF EXAMINATIONS SECTION FOR FIRE DEBRIS *LABORATORY REPORTS*

Example for ignitable liquid and ignitable liquid residues:

Gasoline was identified on Items 1, 2, 3, and 5. The Item 6 liquid was identified as gasoline. Gasoline is an ignitable liquid. No ignitable liquid residues were identified on Items 7 and 8.

Items 1, 2, 3, 5, 7, and 8 were examined using a passive adsorption/elution technique and analyzed by gas chromatography-mass spectrometry (GC/MS). A portion of Item 6 was diluted with solvent and analyzed by GC/MS.

Example for residues of evaporated gasoline:

Residues of evaporated gasoline were identified in Item 1. The term "evaporated gasoline" is used to refer to gasoline in which some of its components have been reduced or lost through an evaporation process. Various factors can contribute to the evaporation of these components, including heat, time, and environmental conditions.

Example for heavy petroleum distillate residues including carbon range:

A heavy petroleum distillate was identified in Item 1 with a carbon range from C_{10} through C_{18}. Examples of heavy petroleum distillates include kerosene, diesel fuel, some jet fuels, and some charcoal starters.

APPENDIX B: EXAMPLE WORDING FOR ADDRESSING LIMITATIONS OF FIRE DEBRIS *LABORATORY REPORTS*

Example limitation to explain a positive result for an ignitable liquid:

Toluene, which is an ignitable liquid and a component of gasoline, was identified in Items 3 and 4; however, its presence is not necessarily significant because it is common to many different products and materials and is often observed as a background contaminate in fire debris. No other ignitable liquids were identified in Items 3 and 4.

Example of limitation to explain a negative result for an ignitable liquid analysis:

No ignitable liquids were identified within Items 59 and 61 through 65. It is noted that many ignitable liquids are very volatile and may be lost through evaporation, totally consumed during a fire, or indistinguishable from background materials. A negative result for the detection of an ignitable liquid on fire debris does not preclude its presence or use in a fire.

Example limitation for commercial product comparisons and reporting of materials not identifiable as an ignitable liquid:

The terminology "consistent with" does not imply an identification of a specific chemical or product. A substance is termed "consistent with" a material when the analytical data does not support an identification of a specific chemical or product but does provide reliable information to include the substance within a class of materials. The phrase "consistent with" is also used when an appropriate reference standard could not be obtained.